-- Create the Borrower table

CREATE TABLE Borrower (

Rollno INT,

Name VARCHAR2(50),

DateofIssue DATE,

NameofBook VARCHAR2(50),

Status VARCHAR2(50)

);

-- Insert sample data into the Borrower table

INSERT INTO Borrower (Rollno, Name, DateofIssue, NameofBook, Status)

VALUES (14, 'Ram', DATE '2024-06-01', 'Operating System', 'I');

-- Create the Fine table

CREATE TABLE Fine (

Roll\_no INT,

Date DATE,

Amt INT

);

-- Unnamed PL/SQL Block to calculate fine and update the status

DECLARE

-- Declare variables to hold input values

roll\_no INT := &roll\_no; -- Accept roll\_no from user

book\_name VARCHAR2(50) := '&book\_name'; -- Accept name\_of\_book from user

doi DATE;

diff INT;

fine\_amt INT;

-- Manually input today's date

today\_date DATE := DATE '2024-11-10'; -- Use today's date as a constant (change as needed)

BEGIN

-- Fetch the Date of Issue for the given Rollno and NameofBook

SELECT DateofIssue INTO doi

FROM Borrower

WHERE Rollno = roll\_no AND NameofBook = book\_name AND Status = 'I'; -- Only consider issued books

-- Calculate the number of days since DateofIssue

diff := today\_date - doi;

-- Calculate the fine based on the number of days overdue

IF diff BETWEEN 15 AND 30 THEN

fine\_amt := diff \* 5; -- Rs 5 per day for 15 to 30 days overdue

ELSIF diff > 30 THEN

fine\_amt := (diff - 30) \* 50 + 75; -- Rs 50 per day for days > 30, Rs 5 for first 30 days

ELSE

fine\_amt := 0; -- No fine if the book is returned on time or within 15 days

END IF;

-- If there is a fine, insert it into the Fine table

IF fine\_amt > 0 THEN

INSERT INTO Fine (Roll\_no, Date, Amt)

VALUES (roll\_no, today\_date, fine\_amt);

END IF;

-- Update the status of the borrower to 'R' (Returned)

UPDATE Borrower

SET Status = 'R'

WHERE Rollno = roll\_no AND NameofBook = book\_name AND Status = 'I';

-- Commit the transaction to save the changes

COMMIT;

-- Output a message for user confirmation

DBMS\_OUTPUT.PUT\_LINE('Book returned successfully. Fine amount: Rs ' || fine\_amt);

END;

/

-- After running the above block, you can verify the results with the following SELECT statements:

-- Check the fine details inserted into the Fine table

SELECT \* FROM Fine;

-- Check the updated Borrower table to verify the status change

SELECT \* FROM Borrower;